

# ***Adjustable Strike Mounting System***

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## **BACKGROUND OF THE INVENTION**

### **FIELD OF THE INVENTION**

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The present invention relates generally to strikes and more particularly to adjustable strikes.

### **BACKGROUND ART**

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Double entrance doorways are used in a large variety of residential homes and commercial buildings. Typically, an active door provides for day to day ingress and egress to and from the residential home or building, and an inactive door remains closed, except in instances when a width greater than or equal to the width of the active door and less than or equal to the width of the double entrance doorway is required, such as, for example, for delivery of furniture and/or equipment that cannot fit through the double entrance doorway. If large objects, such as furniture and/or equipment must pass through the double entrance doorway, both the normally inactive door and the

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active door of the doorway are opened, to create a wide entrance way, through which the furniture and/or equipment may pass.

Mating edges of the inactive door and the active door do not typically contact one another directly, but are separated by an astragal, the astragal being attached to the edge of an inactive leaf, the astragal extending the length of the inactive door, cushioning the closing of the active door and associated inactive leaf of the doorway, and sealing gaps between the inactive door and the active door.

The astragals often have upper and lower bolt-slide assemblies, which lock the astragals and the inactive doors to upper and lower portions of a door frame surrounding the double entrance door way. The upper and lower bolt-slide assemblies have bolts, which slide within upper and lower ends of the astragal, and are pushed outwardly from the inactive door to extend beyond the ends of the astragal, and are received by upper and lower apertures in the upper and lower portions of the door frame, also known as the header and threshold sill, respectively, to lock the inactive door in place.

The astragals typically have strike plates installed on the inactive door. The strike plates accept bolts, from deadbolts and locksets installed on the active door, which are used to lock the active door to the inactive door, and, thus, lock and restrict access through the double entrance doorway. The process of installing the strike plates on the inactive door requires alignment of the bolts with apertures of the strike plates, the process often time consuming and tedious, with strike fasteners difficult to locate and

align on the astragal, often falling into the astragal, and jamming the astragal and other operating parts of the astragal

There is thus a need for an adjustable strike mounting system, which allows at least one  
5 strike plate to be fastened to an astragal installed and/or incorporated into the edge of an  
inactive door of a double entrance doorway, facilitates quick, easy, and efficient  
installation and alignment of the strike plates with locks and deadbolts installed in the  
active door, allows vertical and horizontal movement of the strike plates in the astragal,  
facilitates location and alignment of fasteners, and minimizes loss of the fasteners  
10 within the astragal and resultant jamming of the astragal and other operating parts of the  
astragal.

The adjustable strike mounting system should have a cover plate, which can be  
mounted to an astragal having a housing, which has a longitudinal channel having  
15 retention guides, vertically slidable blocks, which have transverse slots, having  
horizontally slidable threaded elements, and spring leaves, which are adapted to hold  
the vertically slidable blocks in selected positions, the cover plates adapted to provide  
mounting surfaces for the strike plates, the cover plates abutting the retention guides,  
the strike plates having apertures, which can be aligned with locations of the locks and  
20 deadbolts quickly, easily, and efficiently.

Different adjustable strikes have heretofore been known. However, none of the  
adjustable strikes adequately satisfies these aforementioned needs.

U.S. Patent Nos. 5,350,207 and 5,328,217 (Sanders) disclose locking astragals, for attaching to an inactive leaf of a double doorway, and in particular U.S. Patent No. 5,328,217 discloses an adjustable strike plate. Each of the locking  
5 astragals has an elongated astragal casing, which has a channel and bolt-slide assemblies mounted slidably within the channel. Each bolt-slide assembly includes a latching member and bolt. By depressing the latching member, the latching member can slide through the channel, to extend and lock the bolts into indentations in upper and lower surfaces of a door frame. The bolts may also be  
10 retracted back into the astragal, to open the inactive leaf. Each of the latching members has an integral spring, which simplifies fabrication and assembly.

U.S. Patent No. 6,491,326 (Massey, et al) discloses a swing adaptable astragal with lockable unitary flush bolt assemblies, for double door entryways, which  
15 includes an extruded aluminum frame into which upper and lower flush bolt assemblies are slidably disposed. The flush bolt assemblies include a long metal bolt about which is injection overmolded a series of retainer guides, which ride in the frame. Locking mechanisms are also integrally overmolded onto the bolts. The frame and all components of the astragal assembly are  
20 symmetrical and reversible, so that the assembly is non-handed; that is, it can be adapted to both a right hand swing and a left-hand swing inactive door. A strike plate mounting system and bottom-sealing block are provided, and the upper end of the assembly includes means for sealing against a stop of a head jamb.

Drafts at upper and lower inside corners of the doors of a double door entryway may be prevented.

U.S. Patent No. 5,118,151 (Nicholas, Jr., et al) discloses an adjustable door strike and mounting template, having a striker plate, a main body, and a slider plate. The main body is affixed to a door jamb, with the slider plate between the door jamb and the main body, and adjustably mounted for receiving a standard striker plate. The main body is provided with an elongated aperture in the vertical direction, which permits the striker plate to have a continuous range of adjustments in the vertical direction. A mounting template for facilitating the installation of a door strike is also disclosed. The adjustable door strike and mounting template allow for mounting a door lock with either or both a latch and a deadbolt, without adversely affecting the door jamb.

U.S. Patent No. 5,171,050 (Mascotte) discloses an adjustable strike for door-locking and door-latching mechanisms of a door hingedly mounted onto a door frame, which comprises a plate member, having spaced openings mounted along an aperture of the door frame, and secured thereto for receiving plungers of the door-locking and door-latching mechanisms, to maintain the door in a closed and/or locked position. An adjustment member is located on the plate member adjacent at least the opening, for receiving the plunger of the door-latching mechanism, and being adjustable for engagement with such plunger to

prevent play between the door and the door frame, when the door is in a closed and latched position.

U.S. Patent No. 4,492,397 (Allenbaugh) discloses an adjustable strike,  
5 comprising a strike plate, having a center section, with an aperture for receiving a bolt or latch, and upper and lower sections, disposed on opposite sides of the center section, that include interlock surfaces and horizontally elongated slots for receiving screws. Upper and lower keeper plates have corresponding interlock surfaces that engage those of the strike plate in a selected position to  
10 prevent movement of the strike plate. The keeper plates have round screw holes that can be aligned with the slots of the strike plate. Preferably, the interlock surfaces are formed by contiguous, V-shaped, vertically extending grooves.

U.S. Patent No. 4,113,293 (Paquette) discloses an adjustable strike for a latch  
15 bolt of a swinging door, the strike having a face plate to be placed over an appropriate cavity, and having a lip to extend into a doorway to engage and to press the latch bolt as the door closes. A flange is secured normal to the plate to extend into or beside the cavity, between the plate opening and the lip. A bolt extends through the flange, preferably being threaded therethrough. A movable  
20 wall, parallel to the flange, and spaced therefrom, is secured to the end of the bolt, and situated within the cavity behind the face plate, to be positioned within the plate opening, so that a keeper surface of the latch bolt bears against this wall, when the door is closed. Longitudinal movement of the bolt and the

flange causes the wall to move towards or away from the flange, thereby altering the distance between the door stop and the movable wall. The wall is moved to a distance which provides a secure fit of the latch bolt and minimizes rattling of the closed door. The adjustable strike facilitates hanging of a door on a door frame, and subsequent adjustments required to minimize vibration of the door when closed.

U.S. Patent No. 5,857,291 (Headrick) discloses an astragal with integral sealing lock block, for use with a double door installation, which includes an astragal strip secured along a vertical edge of an inactive door. A lock block is slidably disposed in at least one end of the astragal strip, and can be moved between an extended position, for securing the inactive door, and a retracted position for freeing the inactive door. The lock block has a projecting bolt receivable in a receptacle in a door frame, when the lock block is slid to its extended position. A gasket is secured to an end of the lock block, and the bolt passes through an opening in the gasket. The gasket engages and seals against the door frame, when the lock block is in its extended position. Gaskets are also provided on the sides of the lock block, for engaging and sealing against the doors of the double door installation. When the doors are closed and secured in place, the lock block and gasket assembly prevents drafts from flowing under the door installation beneath the astragal thereof.

U.S. Patent Nos. 5,337,451 and Re. 35,618 (Goossens) disclose a gear hinge, having a thrust bearing. The hinge may include, in various combinations, gears having relatively small, rounded teeth, hinge members, which have anodized surfaces, bearings, which may be produced by a gas assisted injection molding process, and bearings, which are relatively hard.

Applications for gear hinges include swinging doors and folding curtains, used to divide large rooms. Typically, such hinges have bearing blocks, to prevent longitudinal movement of the gear hinges within the doors and folding curtains.

U.S. Patent No. 5,492,208 (Goossens) discloses an intumescent security pin for fire rated doors. In a door assembly composed of a door frame, a door having a hinge side and a hinge supporting the door on the frame, for pivotal movement of the door between an open position and a closed position, the hinge side of the door facing, and being adjacent to, a portion of the frame when the door is in the closed position, the door is provided with a recess in the hinge side; and the assembly is further provided with at least one projecting element secured to the frame portion to project into the recess, when the door is in the closed position and having a mass of thermally intumescent material, which is expandable for securing the projecting element to the door, upon being heated above a predetermined temperature.



U.S. Patent No. 6,170,210 (Marts) discloses a continuous gear hinge with  
intumescent seals, having extruded aluminum leaves and an extruded aluminum  
cap, which holds the leaves together at meshed gear segments on the leaves, and  
has the capacity to establish a seal between the door and hinge jamb to which it  
5 is attached. That seal derives from intumescent strips, which lie in recesses that  
open out of the leaves. In the presence of a fire, the intumescent material, the  
strips of which extend the full length of the hinge, expands and bonds to the  
door and hinge jamb to not only seal the space between the two, but also to  
secure the door, should the hinge lose its capacity to hold the door.

10 U.S. Patent No. 4,429,493 (St. Aubin) discloses an astragal housing seal and  
lock, for use in a double door assembly having an active door and a relatively  
inactive door. The astragal has a vertically extending mullion housing, which is  
attached to a free edge of the relatively inactive door. A vertically extending  
15 slide section is mounted on the mullion housing on a sealing side of the free  
edge of the inactive door. The slide section extends from the free vertical edge  
of the inactive door, when the active door is in the closed position. The slide  
section is vertically movable from an unlocked position to a locked position,  
wherein the slide section is moved vertically downward, with respect to the  
20 mullion housing, to engage the sill/threshold of the door frame, thereby  
preventing movement of the inactive door.

U.S. Patent No. 4,644,696 (Bursk) discloses a patio door assembly for removable astragal, in which a double door installation includes an astragal, which is removably mounted in a head jamb and sill portions of a door frame independently of the doors, the combination including a locking mechanism in one door, which incorporates a bolt arranged to project through the astragal into the other door to effect locking of both doors to each other and to the astragal.

U.S. Patent Nos. 5,893,594 and 5,678,871 (Zarzycki, Jr.) disclose a security astragal, which includes a security bar, that protects against tampering, having a door latching mechanism and a protective sheath, that secures the security bar from unauthorized removal.

U.S. Patent No. 6,457,751 (Hartman) discloses a locking assembly for an astragal, which can be attached to an inactive door of a double door unit of a residence or a building. The astragal is attached to an edge of the inactive door in space between the inactive door and active door. A separate locking assembly is attached adjacent a top end of the door and also adjacent a bottom end of the door. A plug having an elongated locking bolt extending therefrom is mounted in a front end of a carriage member. Additional structure is provided for reciprocal travel of the carriage member between a locked position and an unlocked position.

U.S. Patent No. 5,335,450 (Procton) discloses an astragal, which has an exterior aluminum extrusion and an interior wooden portion. The exterior extrusion includes a pair of rearwardly extending center walls, which form a channel for receiving the wooden interior portion. Attachments and door hardware can be  
5 installed in the wooden interior portion, while the extruded exterior acts as cladding.

For the foregoing reasons, there is a need for an adjustable strike mounting system, which allows at least one strike plate to be fastened to an astragal installed and/or  
10 incorporated into the edge of an inactive door of a double entrance doorway, facilitates quick, easy, and efficient installation and alignment of the strike plates with locks and deadbolts installed in the active door, allows vertical and horizontal movement of the strike plates in the astragal, facilitates location and alignment of fasteners, and minimizes loss of the fasteners within the astragal and resultant jamming of the astragal  
15 and other operating parts of the astragal. The adjustable strike mounting system should have a cover plate, which can be mounted to an astragal having a housing, which has a longitudinal channel having retention guides, vertically slidable blocks, which have transverse slots, having horizontally slidable threaded elements, and spring leaves, which are adapted to hold the vertically slidable blocks in selected positions, the cover  
20 plates adapted to provide mounting surfaces for the strike plates, the cover plates abutting the retention guides, the strike plates having apertures, which can be aligned with locations of the locks and deadbolts quickly, easily, and efficiently.

## SUMMARY

The present invention is directed to an adjustable strike mounting system, which allows at least one strike plate to be fastened to an astragal installed and/or incorporated into the edge of an inactive door of a double entrance doorway, facilitates quick, easy, and efficient installation and alignment of the strike plates with locks and deadbolts installed in the active door, allows vertical and horizontal movement of the strike plates in the astragal, facilitates location and alignment of fasteners, and minimizes loss of the fasteners within the astragal and resultant jamming of the astragal and other operating parts of the astragal.

The adjustable strike mounting system has a cover plate, which can be mounted to an astragal having a housing, which has a longitudinal channel having retention guides, vertically slidable blocks, which have transverse slots, having horizontally slidable threaded elements, and spring leaves, which are adapted to hold the vertically slidable blocks in selected positions, the cover plates adapted to provide mounting surfaces for the strike plates, the cover plates abutting the retention guides, the strike plates having apertures, which can be aligned with locations of the locks and deadbolts quickly, easily, and efficiently.

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An adjustable strike mounting system having features of the present invention comprises: a channel having an opening, a bottom and longitudinally disposed opposing

tracks; a cover plate straddling the opening and abutting the longitudinally disposed  
opposing tracks, the cover plate having an aperture;  
male fasteners; female fasteners; a strike plate having an aperture and holes receiving  
the male fasteners therethrough; the strike plate abutting the cover plate, the strike plate  
5 aperture and the cover plate aperture substantially common one with the other, the  
strike plate aperture receiving the strike plate received male fasteners therethrough;  
positioning blocks adapted to align the strike plate aperture with a bolt, each the  
positioning block having a chamber, the chamber having one of the female fasteners  
therein, and a hole from the exterior of the block to the chamber receiving one of the  
10 received cover plate male fasteners therethrough, the male fastener mating with and  
fastened to the female fastener therein the chamber, the chamber adapted to retain the  
female fastener therein when the male fastener is fastened to the female fastener, and  
transverse sets of opposing rails and adjacent spring leaves, the transverse sets of  
opposing rails and adjacent spring leaves mounted therein the channel between the  
15 bottom and the opposing tracks of the channel.

## DRAWINGS

These and other features, aspects, and advantages of the present invention will become better understood with regard to the following description, appended claims, and

5 accompanying drawings where:

FIG. 1 is a perspective view of an adjustable strike mounting system, constructed in accordance with the present invention;

FIG. 2 is an exploded view of a portion of the adjustable strike mounting system;

FIG. 3 is a perspective view of a positioning block of the adjustable strike mounting  
10 system;

FIG. 4 is a perspective view of entrance doors, comprising an inactive door, shown in a closed position, and an active door;

FIG. 5 is a perspective view of the inactive door, showing the adjustable strike mounting system and an astragal installed thereon the inactive door;

15 FIG. 6 is a section view of the adjustable strike mounting system;

FIG. 7 is another section view of the adjustable strike mounting system;

FIG. 8 is a section view of the strike mounting system shown with an alternate embodiment of an astragal installed thereon the inactive door;

FIG. 9 is a section view of the strike mounting system shown with an alternate  
20 embodiment of an astragal installed thereon the inactive door;

FIG. 10 is a section view of the strike mounting system shown with an alternate embodiment of an astragal installed thereon the inactive door, and also showing the active door;

FIG. 11 is a section view of the strike mounting system shown with an alternate embodiment of an astragal installed thereon the inactive door, and also showing the active door;

FIG. 12 is a section view of the strike mounting system shown with an alternate embodiment of an astragal installed thereon the inactive door, and also  
5 showing the active door; and

FIG. 13 is a section view of the strike mounting system shown with an alternate embodiment of an astragal installed thereon the inactive door, and also showing the active door.

## REFERENCE NUMERALS

These and other features, aspects, and advantages of the present invention will become better understood with regard to the references and associated reference numerals of the

5 following description and accompanying drawings where:

- |    |           |                                   |
|----|-----------|-----------------------------------|
|    | <b>1</b>  | adjustable strike mounting system |
|    | <b>2</b>  | positioning block                 |
|    | <b>3</b>  | screw                             |
|    | <b>4</b>  | nut                               |
| 10 | <b>5</b>  | cover plate                       |
|    | <b>6</b>  | lockset strike                    |
|    | <b>7</b>  | deadbolt strike                   |
|    | <b>10</b> | astragal                          |
|    | <b>14</b> | block                             |
| 15 | <b>16</b> | block top                         |
|    | <b>18</b> | block bottom                      |
|    | <b>20</b> | block side                        |
|    | <b>22</b> | block end                         |
|    | <b>24</b> | retaining rail                    |
| 20 | <b>26</b> | spring leaf                       |
|    | <b>28</b> | chamber                           |
|    | <b>30</b> | chamber roof                      |
|    | <b>32</b> | roof rails                        |



	<b>34</b>	chamber floor
	<b>36</b>	floor rails
	<b>38</b>	hole
	<b>40</b>	oblong hole
5	<b>42</b>	rectangular hole
	<b>43</b>	oblong hole arcuate end
	<b>44</b>	oblong hole side
	<b>50</b>	plate
	<b>52</b>	cover plate side
10	<b>54</b>	cover plate aperture
	<b>56</b>	aperture corner
	<b>58</b>	exterior edge
	<b>60</b>	interior edge
	<b>61</b>	cover plate retaining lip
15	<b>62</b>	lockset strike aperture
	<b>63</b>	lockset strike hole
	<b>64</b>	deadbolt strike aperture
	<b>65</b>	deadbolt strike hole
	<b>66</b>	astragal housing
20	<b>68</b>	longitudinal channel
	<b>70</b>	longitudinal channel bottom
	<b>72</b>	longitudinal channel wall
	<b>73</b>	longitudinal channel end

	<b>74</b>	L shaped retention guide
	<b>76</b>	retention guide base
	<b>78</b>	retention guide side
	<b>80</b>	retention guide edge
5	<b>82</b>	retention guide retaining lip
	<b>84</b>	side channel
	<b>90</b>	inactive door edge
	<b>92</b>	inactive door
	<b>94</b>	door frame
10	<b>96</b>	astragal end
	<b>98</b>	astragal bolt
	<b>100</b>	sill
	<b>102</b>	header
	<b>104</b>	lockset
15	<b>106</b>	deadbolt
	<b>108</b>	active door
	<b>110</b>	seam
	<b>300</b>	alternate astragal housing
	<b>302</b>	saw tooth recess
20	<b>304</b>	finned tail
	<b>306</b>	foam weather strip
	<b>308</b>	cavity
	<b>310</b>	alternate astragal housing

	<b>312</b>	thermal break
	<b>314</b>	slot
	<b>320</b>	alternate astragal
	<b>322</b>	alternate astragal housing
5	<b>324</b>	cover
	<b>326</b>	outer seal
	<b>328</b>	inner seal
	<b>330</b>	alternate astragal
	<b>332</b>	thermal break
10	<b>340</b>	alternate astragal
	<b>342</b>	cover element
	<b>344</b>	saw tooth recess
	<b>346</b>	finned tail
	<b>348</b>	weather strip seal
15	<b>349</b>	inner seal
	<b>350</b>	alternate astragal
	<b>352</b>	thermal break

## DESCRIPTION

5 The preferred embodiments of the present invention will be described with reference to  
FIGS. 1-13 of the drawings. Identical elements in the various figures are identified with  
the same reference numbers.

FIGS. 1-7 show an embodiment of the present invention, an adjustable strike mounting  
10 system **1**, which comprises positioning blocks **2**, screws **3**, nuts **4**, a cover plate **5**, and a  
lockset strike **6** and/or deadbolt strike **7**, for use with an astragal **10**.

Each of the positioning blocks **2** comprises a block **14** having a top **16**, a bottom **18**,  
opposing sides **20**, and opposing ends **22**, and transverse sets of opposing retaining rails  
15 **24** and adjacent spring leaves **26** molded to the opposing ends **22** of the block **14**, the  
block **14** having a chamber **28**, which has a roof **30** having roof rails **32** and a floor **34**  
having floor rails **36**, the chamber **28** and the opposing roof rails **32** defined by a hole  
**38** through the block **2** from one of the opposing ends **22** to the other one of the  
opposing ends **22** and an oblong hole **40** through the top **16** of the block **14** to the roof  
20 **30** of the chamber **28**, the chamber **28** and the opposing floor rails **36** defined by a  
substantially rectangular hole **42** through the floor **34** of the chamber **28** to the bottom  
**18** of the block **2**, the oblong hole **40** having arcuate ends **43** and substantially parallel

sides **44**, and preferably being countersunk. The chamber **28** also has sides, which may have nibs and/or small projections protruding therefrom.

Each of the cover plates **5** comprises a substantially planar plate **50** and opposing sides **52**, which are substantially perpendicular to the substantially planar plate **50**, the substantially planar plate **50** having a substantially rectangular aperture **54**, which has arcuate corners **56**, each of the opposing sides **52** having a substantially planar exterior edge **58** and an interior edge **60** having a longitudinal retaining lip **61**.

The lockset strike **6** has aperture **62** and holes **63**, and the deadbolt strike **7** has aperture **64** and holes **65**.

The astragal **10** has astragal housing **66** having a longitudinal channel **68**, which has a bottom **70**, opposing walls **72**, and opposing ends **73**, each of the opposing walls **72** having a track or longitudinal substantially L shaped retention guide **74**, which has a longitudinal base **76** substantially perpendicular to the longitudinal wall **72** and a longitudinal side **78** substantially parallel to the longitudinal wall **72**, the longitudinal side **78** having an edge **80** having a longitudinal retaining lip **82** adjacent to and facing the longitudinal wall **72**, and which forms a longitudinal side channel **84**.

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The astragal **10** is mounted to edge **90** of inactive door **92** of door frame **94**, and the adjustable strike mounting system **1** is mounted to the astragal **10**, as shown in FIGS. 4 and 5. The astragal **10** has opposing ends **96** and bolts **98**, the bolts **98** slidably

mounted in the longitudinal channel **68** of the astragal **10** at the opposing ends **96**, for securing the inactive door **92** to sill **100** and/or header **102** of the door frame **94**. The astragal **10** may have actuating means for retracting and/or extending the bolt **98** into the sill **110** and/or the header **102**. Lockset **104** and/or deadbolt **106** are mounted to  
5 active door **108** of the door frame **94**.

The adjustable strike mounting system **1** is installed onto the astragal **10**, as follows:

the nuts **4** are inserted into the holes **38** of the positioning blocks **2**, the nuts **4**  
10 being forced to pass the nibs and/or small projections on the sides of the chambers **28** of the positioning blocks **2**, once passed the nibs and/or small projections preventing the nuts **4** from falling out of the positioning blocks **2** and maintaining the nuts **4** in suitable positions adjacent the oblong holes **40** to allow the screws **3** to be easily fastened thereto, upon completion of which each  
15 of the positioning blocks **2** has one of the nuts **4** therein;

each of the positioning blocks **2** is inserted into one of the opposing ends **73** of the longitudinal channel **68** of the astragal **10** and slid to a selected location, estimated to be in the vicinity of the lockset **104** and/or the deadbolt **106**  
20 mounted on the active door **108** when the active door **108** and the inactive door **92** are closed adjacently abutting one another, the opposing retaining rails **24** of the positioning blocks **2** abutting the longitudinal base **76** of the longitudinal substantially L shaped retention guide **74** and the spring leaves **26** of the

positioning blocks **2** being spring loaded under compression and abutting the bottom **70** of the longitudinal channel **68** of the astragal **10**, the positioning blocks **2** being retained in place by the opposing retaining rails **24** and the spring loaded spring leaves **26** and holding the positioning blocks **2** at the  
5 selected locations during installation of the adjustable strike mounting system **1**;

the astragal **10** is mounted to the edge **90** of the inactive door **90**;

the cover plates **5** are trimmed or cut to appropriate lengths, the lengths of  
10 which preferably hide seam **110** beneath the lockset strike **6** and/or the deadbolt strike **7**, and snapped onto the astragal **10**, the cover plates **5** being held in place during installation by the substantially planar exterior edges **58** and the interior edges **60** of the cover plates **5** being force fit into the longitudinal side channels **84** of the astragal **10**, the longitudinal retaining lips **61** of the cover plates **5**  
15 abuttingly adjacent the longitudinal retaining lips **82** of the longitudinal side channels **84** of the astragal **10**;

the cover plates **5** may alternatively be cut or trimmed to the appropriate lengths, inserted into one of the opposing ends **73** of the longitudinal channel **68**  
20 of the astragal **10**, and slid into place, prior to the astragal **10** being mounted to the edge **90** of the inactive door **90**;

the lockset strike 6 and/or the deadbolt strike 7 are loosely fitted to the positioning blocks 2 by inserting the screws 3 through the holes 63 of the lockset strike 6 and the holes 65 of the deadbolt strike 7 through the substantially rectangular apertures 54 of the cover plates 5, through the oblong  
5 holes 40 of the positioning blocks 2, and loosely fastening the screws 3 to the nuts 4 therein, the lockset strike 6 and/or the deadbolt strike 7 adjacent the cover plates 5, the lockset strike 6 and/or the deadbolt strike 7 being pulled toward the positioning blocks 2, as the screws 3 are fastened to the nuts 4;

10 the aperture 62 of the lockset strike 6 is matingly aligned with a bolt of the lockset 104, and the aperture 64 of the deadbolt strike 7 is matingly aligned with the deadbolt 106, the screws 3 and nuts 4 being slid within the holes 38 in the lengthwise direction of the oblong holes 40 for horizontal alignment of the lockset strike 6 and/or the deadbolt strike 7 on the astragal 10, the nuts 4 being  
15 slidable within the holes 38, the positioning blocks 2 being slid up and/or down for vertical alignment of the lockset strike 6 and/or the deadbolt strike 7, the positioning blocks 2 being slidable within the longitudinal channel 68 of the astragal 10, the countersunk portions of the oblong holes 40 aiding in alignment and preventing any countersunk portions of the holes 63 of the lockset strike 6  
20 and/or any countersunk portions of the holes 65 of the deadbolt strike 7 and/or heads of the screws 3 from interfering with the positioning blocks 2 one with the other;



upon completion of matingly aligning the aperture **62** of the lockset strike **6**  
with the lockset **104** and matingly aligning the aperture **64** of the deadbolt strike  
**7** with the deadbolt **106**, the screws **3** are fastened to the nuts **4**, completing the  
installation, with the screws **3** in tension, the screws **3** pulling the nuts **4** against  
5 the roof rails **32** of the positioning blocks **2**, forcing and holding the retaining  
rails **24** of the positioning blocks **2** in place abuttingly against the longitudinal  
bases **76** of the longitudinal substantially L shaped retention guides **74** of the  
astragal **10**, forcing and holding the lockset strike **6** and/or the deadbolt strike **7**  
in place abuttingly against the cover plates **5**, and forcing and holding the cover  
10 plates **5** in place with the exterior edges **58** and the interior edges **60** of the  
cover plates **5** being forced into the longitudinal side channels **84** of the astragal  
**10**, the longitudinal retaining lips **61** of the cover plates **5** abuttingly adjacent  
the longitudinal retaining lips **82** of the longitudinal side channels **84** of the  
astragal **10**.

15 The positioning blocks **2** are preferably injection molded from an engineered plastic  
resin, such as an acetal, to provide the necessary flexural strength and properties for the  
spring leaves **26**, although other suitable materials may be used. The astragal housing  
**66** and the cover plates **5** are preferably of metal, such as aluminum or steel,  
20 thermoplastics, thermosetting polymers, rubber, or other suitable material or  
combination thereof.

FIGS. 8-13 show alternate embodiments of astragals having astragal housings that the adjustable strike mounting system 1 may be used with, although other suitable astragals having other suitable astragal housings may be used.

5 FIG. 8 shows an alternate embodiment of an astragal housing 300, which has a saw-tooth recess 302 to retain finned tail 304 of a typical wrapped foam type weather strip 306 for sealing. The astragal housing 300 also has cavity 308.

FIG. 9 shows an alternate embodiment of an astragal housing 310, which is  
10 substantially the same as the astragal housing 300, except that the astragal housing 310 has thermal break 312, for installations in climates that experience extremely cold weather, in which the astragal housing 310 is fabricated from an aluminum extrusion, or other suitable material having substantially the same properties, which would otherwise readily lose heat to the outside and result in condensation, and in some cases even the  
15 formation of ice. The thermal break 312 is created by filling cavity 308 of the astragal housing 300 with a polyurethane thermal break compound, after which it is de-bridged by milling slot 314, thus, separating outer and inner portions of the astragal housing 310 and preventing infiltration of the cold.

20 FIG. 10 shows an alternate embodiment of an astragal 320, which may be used for installation on a pair of outswinging rather than inswinging doors, which has astragal housing 322, cover 324 that provides overlap, and outer seal 326, and is used on the

active leaf of the pair of out swinging doors. Inner seal **328** is of greater reach as the beveled edge of the active door is reversed, creating a greater gap at its inner edge.

FIGS. 11 shows an alternate embodiment of an astragal **330**, which may be used for installation on a pair of outswinging rather than inswinging doors, which is substantially the same as the astragal housing **320**, except that the astragal **330** has thermal break **332**.

FIG. 12 shows an alternate embodiment of an astragal **340**, which may be used for installation on a pair of outswinging rather than inswinging doors, in which cover element **342** has saw-tooth recess **344** to accommodate finned tail **346** of a wrapped foam weather strip seal **348**. Inner seal **349** is of greater reach as the beveled edge of the active door is reversed, creating a greater gap at the inner edge.

FIGS. 13 shows an alternate embodiment of an astragal **350**, which may be used for installation on a pair of outswinging rather than inswinging doors, which is substantially the same as the astragal housing **340**, except that the astragal **350** has thermal break **352**.

Although the present invention has been described in considerable detail with reference to certain preferred versions thereof, other versions are possible. Therefore, the spirit and scope of the appended claims should not be limited to the description of the preferred versions contained herein.